

**Commonwealth of Kentucky
Division for Air Quality**

PERMIT APPLICATION SUMMARY FORM

Completed by: Prathap John

GENERAL INFORMATION:

Name:	Department for Facilities and Support Services
Address:	701 Holmes Street Frankfort, KY 40601
Date application received:	5/3/2007
SIC Code/SIC description:	9199, Kentucky State Capitol Utility Services
Source ID:	21-073-00085
Agency Interest:	85158
Activity:	APE20070001
Permit:	F-07-030

APPLICATION TYPE/PERMIT ACTIVITY:

<input checked="" type="checkbox"/> Initial issuance	<input type="checkbox"/> General permit
<input type="checkbox"/> Permit modification	<input checked="" type="checkbox"/> Conditional major
__Administrative	<input type="checkbox"/> Title V
__Minor	<input type="checkbox"/> Synthetic minor
__Significant	<input checked="" type="checkbox"/> Operating
<input type="checkbox"/> Permit renewal	<input type="checkbox"/> Construction/operating

COMPLIANCE SUMMARY:

<input type="checkbox"/> Source is out of compliance	<input type="checkbox"/> Compliance schedule included
<input type="checkbox"/> Compliance certification signed	

APPLICABLE REQUIREMENTS LIST:

<input type="checkbox"/> NSR	<input type="checkbox"/> NSPS	<input type="checkbox"/> SIP
<input type="checkbox"/> PSD	<input type="checkbox"/> NESHAPS	<input type="checkbox"/> Other
<input type="checkbox"/> Netted out of PSD/NSR	<input type="checkbox"/> Not major modification per 401 KAR 51:001, 1(116)(b)	

MISCELLANEOUS:

- ☐ Acid rain source
- ☐ Source subject to 112(r)
- ☒ Source applied for federally enforceable emissions cap
- ☐ Source provided terms for alternative operating scenarios
- ☐ Source subject to a MACT standard
- ☐ Source requested case-by-case 112(g) or (j) determination
- ☐ Application proposes new control technology
- ☒ Certified by responsible official
- ☐ Diagrams or drawings included
- ☐ Confidential business information (CBI) submitted in application
- ☐ Pollution Prevention Measures
- ☐ Area is non-attainment (list pollutants):

EMISSIONS SUMMARY:

Pollutant	Actual (tpy)	Potential (tpy)
PM/PM ₁₀	4.5	10.7
SO ₂	2.66	316.25
NO _x	51.42	102.32
CO	28.2	28.2
VOC	4.37	4.51
Single HAPs	NA	9
Source wide HAPs	NA	22.5

SOURCE DESCRIPTION:

The Division for Air Quality received an initial application from the Department for Facilities and Support Services (Kentucky State Capitol) for an initial state permit on May 3, 2007. However, based on the evaluation of potential to emit calculations, emissions of nitrogen oxide (NO_x) and sulfur dioxide (SO₂) exceeded one hundred tons per year, and that triggers the applicability of 401 KAR 52:020-Title V requirements. Upon discussions with the permittee, it was established that utilization of the back up fuel for all the natural gas boilers might not exceed a third of the year or 229,300 gallons per year. Hence the facility can limit the emissions of NO_x and SO₂ to less than 90 tons per year on any consecutive twelve months total, to preclude the applicability of 401 KAR 52:020 and be permitted as Federally Enforceable/Conditional (401 KAR 52:030) Major source.

Kentucky State Capitol campus utility operation provides utility services to the Commonwealth of Kentucky Capitol Complex, including the Capitol and Capitol Annex. The current utility operation includes two large natural gas boilers (rated at 31.5 and 38.5 MMBtu/hr) each with fuel oil as a backup; two small natural gas boilers rated at 3.17 MMBtu/hr each and one emergency generator rated at 970 KW.

The facility wishes to replace the two large boilers (rated at 31.5 and 38.5 MMBtu/hr) with four smaller natural gas boilers (12.3 MMBtu each). The new natural gas boilers will be purchased with Low-NO_x burners in the spring of 2008. The Kentucky State Capitol Campus utility operation also plans to replace the current emergency generator with two new generators in the fall of 2007. Each of the calculations were done using the diesel emission factors (AP-42) for the worst case scenario.

EMISSIONS AND OPERATING CAPS DESCRIPTIONS:

To preclude the applicability of 401 KAR 52:020, emissions of any regulated air pollutant shall not exceed 90 tons per year on any consecutive twelve months The total source wide usage of #2 fuel oil shall not exceed 229,300 gallons per year.

OPERATIONAL FLEXIBILITY:

None.